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ABSTRACT

This newsletter presents information concerning the building and management of educational facilities in rural areas. The Programme on Educational Building (PEB) operates within the Organization for Economic Cooperation and Development (OECD) (Paris, France) and consists of members from 17 countries that promote the exchange of ideas, information, and research related to aspects of educational building. Articles summarize presentations made at a seminar examining options for maintaining cost-effective infrastructures in rural areas. Topics include: (1) developing educational cooperatives in the United States to improve the quality and equity of rural education; (2) cost summary and design strategies for school construction in a remote area for Australia's Aborigines; (3) facility plans for an elementary school in rural Turkey; (4) facility plans for a school in rural Sweden; (5) plans for a higher education facility in rural Canada; (6) achieving educational equity in rural areas of Austria; and (7) an analysis of the education infrastructure in rural areas. Also included is information about the activities of the PEB and OECD, publications, upcoming conferences and seminars, management guides for school facilities, and research regarding the relationship between building condition and student achievement. A special section presents a philosophy and general principles of design in educational property management. Contains diagrams and photographs. (LP)

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OECD OCDE PEB EXCHANGE
newsletter of the Programme on Educational Building

EDUCATION IN RURAL AREAS

AFTER the introduction of universal, compulsory education in the nineteenth century, almost every village came to have its own school, an institution which still occupies an important place in community life. But even before that process was complete, rural populations peaked and the move to the cities which followed the industrial revolution had begun. Since 1945, as productivity in rural industries has steadily increased, the numbers living in rural areas have declined further. Secondary education is often only available in towns, and higher education in distant cities.

The small rural primary school is under pressure from educationalists who claim that it can no longer offer the richness and quality of curriculum which today's pupils require, and from taxpayers and their elected representatives who see small schools as a luxury which they can no longer afford.

A recent PEB seminar sought to examine some of the options open to those responsible for maintaining an effective educational infrastructure in rural areas — from pre-school to continuing education — without incurring unreasonable costs. The report of the seminar is to be published shortly. As a companion to it, this issue of 'PEB Exchange' discusses some of the issues and summarises some of the presentations which were made at the seminar. The articles illustrate something of the range of patterns of settlement which are included in the word 'rural' — from the remote Aboriginal communities of Australia's Northern Territory, to the network of rural villages found in France, and which are typical of much of northern Europe. They cover not only primary schools, but also secondary and continuing education.

This first 1994 issue of 'PEB Exchange' has been enlarged to 20 pages, and incorporates a four-page section outlining some principles of property management. Future issues will each contain a four-page section on one aspect of property management. Taken together these supplements will create a Property Management File which is intended to be of use to non-specialists who have responsibility for educational facility management.

The June issue of PEB Exchange will include a number of articles on providing for children with special needs. The Property Management section will deal with planning for change.

What is PEB?

The Programme on Educational Building operates within the Organisation for Economic Co-operation and Development (OECD). PEB promotes the international exchange of ideas, information, research and experience in all aspects of educational building. The overriding concern of the programme is to ensure that the maximum educational benefit is obtained from past and future investment in educational buildings and equipment, and that the building stock is planned and managed in the most effective way.

Seventeen countries and six specialist agencies currently participate in the programme. The present mandate of PEB runs until the end of 1996. Each participating country establishes the annual programme of work and budget.

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- Education infrastructure in rural areas

PLUS

News, The Property Management File, Publications

RC 019622

PEB News

New Associate Member

The Research and Development Centre for Educational Facilities at the Tokyo Institute of Technology, Japan, has become the sixth Associate Member of PEB.

The Centre was first established in 1983, and re-organised under its new name in 1993. Its objective is to promote the effective use and management of educational, academic and cultural facilities. It carries out basic and applied research on the planning, design and organisation of facilities.

The Centre is managed by a Steering Committee made up of members of staff of the Tokyo Institute of Technology. The Director of the Centre is Dr. Hideki Shimizu, an architect who is also a professor of engineering. The Director is assisted by three full-time staff, and two visiting professors.

For information about the Centre and its work, contact:
Dr. Hideki SHIMIZU
Research and Development Centre for Educational Facilities
Tokyo Institute of Technology
2-12-1 Ookayama
Meguro-ku
Tokyo 152, Japan

1994 PEB Programme of Work

The PEB Steering Committee met at the end of October and agreed the programme of work for 1994. Among the activities planned are:

- completion of a study on the influence of new technology on the design and use of educational buildings, and publication of the report in September;
- publication of seminar reports on education in rural areas and on facilities for special-needs education;
- work on the design of facilities for higher education in the light of current policies for the expansion of the tertiary sector, and trends in the financing and governance of institutions;
- a conference on facilities for vocational and technical education (see Diary);
- a feasibility study on the development of indicators for educational buildings;
- completion of a report on the use made of educational buildings outside normal school hours;
- preparation of a publication on maintenance policies and practice.

If you would like further information about any of these activities, or think you may have something to contribute to them, please contact the PEB Secretariat.

Documentation available

The following priced publications are available from the OECD Publications Service and its network of sales agents around the world (to order, see page 19):

- *Decentralisation and educational building management: the impact of recent reforms* (reference 95 92 01 1).
- *New technology and its impact on educational buildings* (reference 02 92 15 1).

Back issues of *PEB Exchange* for 1992 and 1993 are also available from OECD Publications.

A report of the PEB seminar held in Vienna in October 1992 entitled *Educational buildings and the environment* (reference GD 93 162) is available free of charge from the PEB Secretariat. A number of other free reports are also available, including:

- *The will to manage energy in schools* (Onslow, J.) 1985.
- *Towards a core information system* (Garden, M.) 1986.
- *Year-round schools — an example from the United States* (Parker, G.) 1986.
- *Golden Grove — a secondary education complex in South Australia* (Mayfield, J. and Trimper, K.) 1989.
- *The Alford Information Technology Centre* (Eley, J.) 1989.
- *Adaptability and flexibility in educational facilities* (Clynes, R.) 1990.
- *Education and training after the compulsory years: buildings, equipment and links with industry* (1990).

Copies of the 1985 publication *Surplus space in schools: an opportunity*, which has been withdrawn from sale, are available free of charge from the PEB Secretariat, as are some issues of *PEB Exchange* for 1986 to 1991.

OECD News

Education indicators just published

The 1993 edition of *Education at a Glance* was released in December, covering a wider range of subjects and countries than before. Country coverage has been expanded to include Hungary and the Czech and Slovak Republics which are part of the OECD's Partners in Transition Programme. The indicators are presented under three main headings: Contexts of education; Costs, resources, and school processes; and Results of education.

Information on current and capital expenditure is one of the eight topics covered in the sub-heading "Expenditure on Education". It shows that within OECD as a whole, about 8 per cent of total

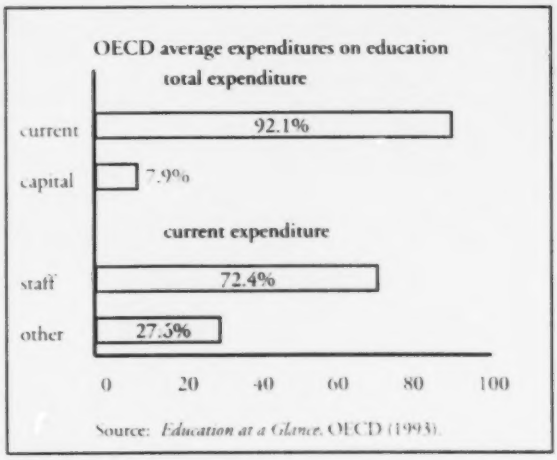
Japan and its Education System in Brief

Total area:	377 800 km²	Duration of compulsory education:	9 years
Population (1991):	124 million	Ages of compulsory education:	6 to 15
Population/km² (1991):	328	Total expenditure on education (1991):	5% of GDP
Population under 15 (1960):	30.1%	Primary ed. pupil/teacher ratio (1991):	20.3
Population under 15 (1991):	17.8%	Secondary ed. student/teacher ratio (1991):	17.3

Sources: OECD in Figures (1993), Education at a Glance: OECD Indicators (1993).

educational expenditure is for capital outlay, but this percentage varies widely, ranging from less than 5 per cent in Belgium, Ireland and Sweden (all levels of education combined) to the 16.7 per cent reported by Japan. The capital share of total expenditure is slightly higher, on average, at the tertiary level than at the primary and secondary levels, but the opposite is true in about one-third of the countries. OECD averages are given in the graph.

Instructions for ordering *Education at a Glance* can be found on page 19.



Source: *Education at a Glance*, OECD (1993).

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From the Members

LETA '94

Preparations are being made in Adelaide for LETA '94, or "Learning Environment Technology — Australia 1994", a major international conference on learning environments at the dawn of the twenty-first century. The themes of the conference are:

- the built technology of the learning environment;
- new information technology and telecommunications in the learning environment;
- managing future learning environments.

PEB will be making substantial contributions to the discussion, and readers of *PEB Exchange* will be especially welcome at the conference.

LETA '94 is intended for anyone who has an interest in education, technology and learning environments: architects, planners, researchers, teachers, managers, business people, politicians.

LETA '94 will take place from 25 to 28 September [illegible] at a number of sites in Adelaide. There will be site visits, and additional events in Adelaide and Sydney until 5 October. LETA '94 will also provide opportunities for delegates to meet with fellow professionals in other parts of Australia, and to visit the site of the 2000 Olympics.

To receive further information about LETA '94, write to:
SAPMEA
80 Brougham Place
North Adelaide
South Australia 5006

Management guides

The Department for Education (DFE) in England has launched a new series of booklets entitled "Managing School Facilities". The series is aimed at headteachers, teachers and governors of schools and each guide will deal with one aspect of the management of school premises.

Most schools in the United Kingdom now have some responsibility for the running and maintenance of their premises. The new guides are designed to raise awareness about management issues, suggest simple actions that schools can take, and provide sources of further information. Two guides in the series have been published so far.

Guide 1 - Saving Water

Schools in England spend over £70 million each year on water. The guide "Saving Water" looks at typical water costs for schools and points out financial and environmental benefits of using water economically. It explains how a water bill is made up, including standing charges, and local taxes, and describes ways of saving water and detecting leaks. A water management checklist and information on water byelaws is provided.

Guide 2 - Swimming Pools

Swimming pools offer a valuable recreational facility that can be shared with the wider community. However, the presence of a swimming pool brings with it certain responsibilities. Management and operational arrangements vary from school to school, and sometimes involve an outside authority, usually, in England, the district council. The guide offers simple guidance on topics including:

- operating procedures;
- the training of pool managers;
- water quality and testing;
- handling chemicals safely;
- maintenance and cleaning;
- energy conservation.

The guide covers both indoor and outdoor pools and includes an explanation of technical terms, and some guidance on desirable pool temperatures.

Both guides are available from Her Majesty's Stationery Office (HMSO) in London, price £3-95 each. Telephone orders can be made on (44) 71 - 873 9090.

CONTACT:
Mr. Mukund PATEL
Department for Education
Room 5/09, Sanctuary Bldgs.
Great Smith Street
London SW1P 3BT
England

National award for primary school

Woodlea Primary School has been chosen as the 1993 Royal Institute of British Architects (RIBA) "Building of the Year".

In announcing the award, RIBA President Frank Duffy said: "Woodlea epitomises the cumulative, long-term benefits of architects and clients working together... Woodlea School is a magical place. It became so not by accident, but because those who commissioned it, designed it, built it and use it were committed to it being special. It is an excellent example of architects' imagination rising to meet expanding client aspirations."

Woodlea Primary School, Bordon, is in the southern English county of Hampshire and was designed by the Hampshire County Architect's Department. The simple timber and brick building sits on a steep slope in dense woodland. It provides for 245 children in seven teaching bases which open onto outdoor wooden balconies.

The "Building of the Year" award is the personal selection of the President. It is chosen from the RIBA National Awards, which in turn are selected from the RIBA Regional Awards.

Educational buildings have featured prominently in the Award since it was established six years ago. Since then, half of the awards for "Building of the Year" have gone to schools. This year, in addition to the "Building of the Year", eight out of the eleven regional award selections included educational buildings.

CONTACT:
RIBA
66 Portland Place
London W1N 4AD, England

Woodlea Primary School

RESEARCH

Building condition and student achievement

Why should we keep our schools in good condition? From the economic point of view, it is accepted that failure to provide sufficient resources to maintain buildings properly is likely to result in much larger repair bills having to be paid at some time in the future. Health and safety considerations also indicate that certain standards must be met. But is there an educational-effectiveness argument for keeping buildings up to scratch?

The intuitive response is yes, but convincing research on this question is difficult to find. Two pieces of recent work by Carol Cash contribute to the discussion.

The first study examined the relationship between the condition of school facilities and both student achievement and student behaviour. The study looked at small, rural high schools in the state of Virginia, in the USA. Building condition in the 4" schools under study was assessed according to certain criteria; student achievement was measured using a standardised test; and student behaviour was determined by the ratio of the number of expulsions, suspensions, violent incidents and substance abuse to the number of students in each school. Achievement scores were adjusted for socio-economic status, and the variables were then analysed.

The study found that student achievement scores were higher in schools with better building conditions. On the other hand, the number of disciplinary incidents was also higher in the better-maintained buildings. Science achievement scores were better in buildings with better science laboratory conditions. The appearance of the building seemed to have a stronger relationship to achievement and behaviour than did structural condition.

However, none of these findings establishes a causal relationship, and the second piece of work, reported in the "Educational Facility Planner" (vol. 31, nr. 4; 1993), is an attempt to develop a model relating building condition and student achievement and behaviour.

Dr. Cash notes that studies have been conducted in business which have related employee production to the physical environment, and have concluded that better conditions are related to higher production and greater employee satisfaction. In attempting to build a theoretical model she postulates that account has to be taken not only of the current condition of the building but also of the circumstances which have brought it to that point — the availability of resources, the attitudes of the administration, the quality of maintenance. Among the elements of environmental condition which are considered are lighting, acoustics, heating and ventilation, colour, and density of occupation.

The paper reviews other research into these questions and concludes that there is some evidence of a link between building condition and educational outcomes, and that further studies are required to shed more light on its nature.

Dr. Cash would be interested to hear from other researchers who have conducted studies in this field and can be contacted at:
George Mason School
7124 Leesburg Pike
Falls Church, VA 22043, USA

CLUSTERING IN THE USA

The following article is a summary of a report entitled "Clustering: working together for better schools" by Paul Nachtigal and Sylvia D. Parker of the Mid-continent Regional Educational Laboratory.

Small rural schools provide public education for the majority of students in the upper Midwest of the United States. Most rural schools have been through at least one round of consolidation and are still experiencing declining enrolments. Further consolidation is not always possible because the distances become too great.

Students who grow up in rural areas are entitled to have access to high quality education like anyone else, and so alternative models for providing education are needed.

Clustering has grown out of the realisation that individual small schools which do not have the resources to address their problems on their own can work together as a group to exchange ideas, share resources, and provide the moral support which is necessary for survival and development.

Certainly, when a school enters into a cluster arrangement it gives up some of its autonomy. Co-operative action by its nature requires people to work together. However, experience shows that this is a small price to pay for the possibility of keeping a small school open and for the educational opportunities that are thus created.

What is clustering?

"Cluster", "consortium", "co-operative", "network" — whatever the name, the concept of a number of school districts working together for the benefit of all is an idea which has come to stay.

"Clusters" were originally conceived as informal arrangements between neighbouring schools for in-service training or curriculum planning, but the concept has grown to include a wide range of more or less formal arrangements.

More formal clusters are likely to be needed when undertaking significant school development activities. School districts that wish to implement new programmes, or to redesign their schools, need the formal structure which will ensure that the institutional commitment necessary for the success of the initiative is present.

Institutionalised consortia are emerging as part of a policy strategy to achieve improved quality, equal access and greater efficiency in rural education.

Benefits of clustering

Academic

- more, and better quality, course offerings for students and other community members;
- a regular exchange of ideas, expertise and new knowledge;
- a reinvigorated teaching staff;
- improvement of teaching and learning.

Economic

- greater purchasing power and the ability to negotiate better prices;
- improved efficiency from the sharing of scarce resources (e.g. specialist teachers or equipment);
- elimination of duplication and waste.

Social

- Students can take part in extra-curricular activities that require large numbers (e.g. orchestras, theatrical productions, team sports).
- Students realise that they are part of a wider community.
- Successful co-operation breeds confidence.

Political

- a more equitable sharing of educational opportunity;
- the chance to demonstrate that small schools can be effective, and are more than an expensive relic from a less urban past.

12 keys to implementing successful clusters

1. Organise the cluster around an agreed and identifiable common purpose.
2. Enter the arrangement prepared to be committed to it for a minimum period of time.
3. Ensure that the members of the cluster are of similar size.
4. Keep the distance between member schools reasonable, so that travel costs and time do not become barriers.
5. Keep the organisational structure simple.
6. Make sure that school leaders are fully committed and take an active part.
7. Make sure that the school board and the local community are involved and understand what is proposed.
8. Enlist the help of organisations that can provide support.
9. Start small and build on success.
10. Be prepared to put a lot of effort in at the early stages.
11. Share the financial burden as far as possible.
12. Establish a clear system of monitoring and accountability in order to foster confidence and public support.

The full report can be obtained free of charge from:

McREL
2550 S. Parker Rd. #500
Aurora, Colorado 80014
USA

SCHOOLS FOR AUSTRALIA'S ABORIGINES

THE NORTHERN TERRITORY Government school system consists of a total of 147 preschools, primary schools, secondary schools and special schools, with a student enrolment of about 30 000. Some 60 Homeland Centre Schools for aboriginal communities in remote areas are also supported. The land area is 1 300 000 square kilometres, roughly one-sixth of the Australian continent, or more than twice that of France. The population density is extremely low as the Northern Territory population is only 176 000. Electricity and water supplies are scarce.

The Northern Territory Government and the Aboriginal Education Consultative Group (Feppi) support the devolution of responsibility for education to the appropriate level, and the aboriginal communities are encouraged both to take responsibility for, and to carry out, new construction and repair work.

Nudgeburra Homeland Centre School

The Nudgeburra community is an Aboriginal Homeland in the Nicholson River area near the Northern Territory-Queensland border. Since title for the land was granted to the Aboriginal people in 1986 there has been a steady flow of people back to the area. There are five main communities, all of which are isolated. Road access is limited to four-wheel drive vehicles in the dry season from May to December; for the rest of the year access is usually restricted to light aircraft.

Although the need for education is growing, it was not feasible in the short term to provide a fully operational school at each of the five communities. Nudgeburra was chosen as the first in which to build because of its stable population, reliable water supply, airstrip and location. Even so, the community has no electricity. A solar-powered radio transceiver is the only rapid communications link with other communities in the region and the outside world.

The communities in the Nicholson River area receive assistance in financial management, communications and other essential services from an Aboriginal Resource Centre in Tennant Creek, almost 500 kilometres distant.

Between 40 and 50 school-age children live in the area, and families which were relocating expected educational provision which would match that which they had previously had. After discussion with the community it was decided to provide a new building at Nudgeburra, including two teaching spaces, stores, basic residential accommodation and amenities (see plan).

The facility at Nudgeburra cost AS 300 000. Because of the additional load on the existing community water supply, the solar-powered bore pump had to be upgraded, and water storage facilities improved. The school also had to be self-sufficient in power, and uses solar power for all electrical appliances, and liquefied petroleum gas for cooking.

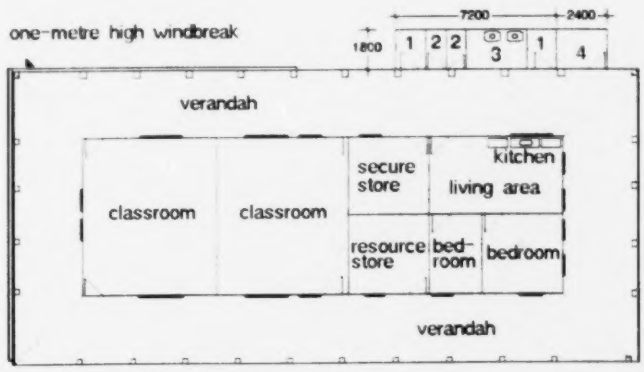
The school was built at ground level with a steel frame. The walls were clad in pre-fabricated metal panels, which allowed for easier transportation of materials to the site and simplified the construction process. Mechanical ventilation was not possible, so particular attention had to be paid to the orientation of the building. Wide verandahs were provided to minimise solar gain, and to provide flexibility in space use.

The design strategy was to maximise floor space in the school, to satisfy community preferences, and to ensure that the school was self-sufficient in services. Local people were employed in constructing the school.

Cost summary:

	Cost in A$
Building construction	160 000
Solar power system	60 000
Solar bore pump upgrade	45 000
Water tank	20 000
Miscellaneous	10 000
Site work and fencing	5 000
Total	**300 000**

More details about this building and case studies of two others are included in a booklet available from:
Mr. Damien BERGER
Management Services Branch
NT Department of Education
GPO Box 4821
Darwin NT 0801, Australia



1. Shower
2. WC
3. Laundry
4. Battery shed

ELEMENTARY EDUCATION IN RURAL TURKEY

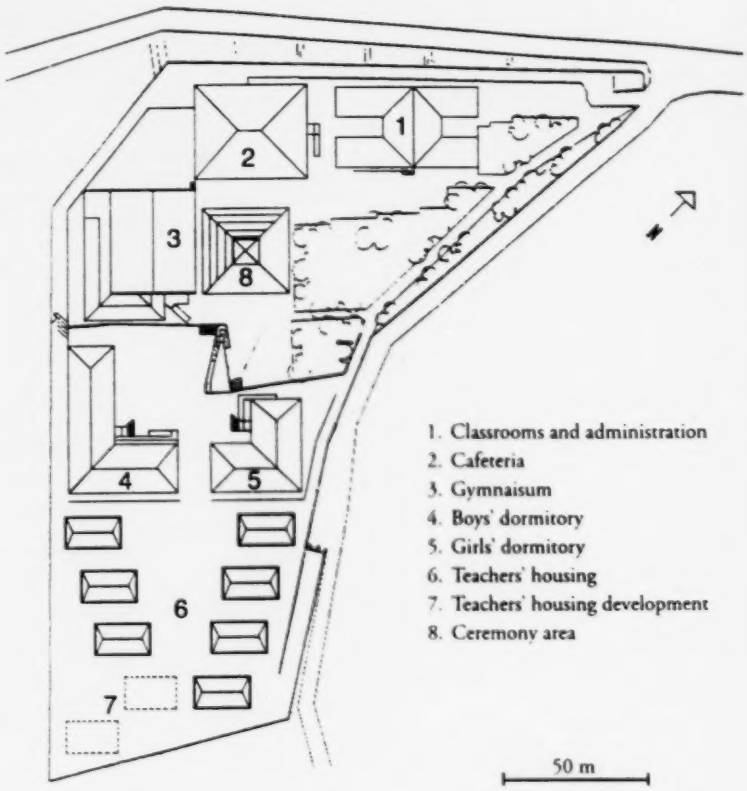
TURKEY has a land area of 780 000 square kilometres and a population of about 58 million. A small area of the country lies in Europe, while the remainder is part of Asia. The biggest region, Anatolia, is a high plateau enclosed by mountains to the north, south and east. Unlike in most OECD countries, where agricultural employment has fallen dramatically this century, more than 50 per cent of the population of Turkey earn their living from the land. Nonetheless, industrialisation and mechanisation has led to the migration of rural populatons to the main urban centres. The annual birthrate, at about 2 per cent, is the highest in the OECD area, and the population is relatively young. Turkey is divided administratively into 76 provinces, 839 districts, and more than 35 000 villages.

Elementary education in Turkey covers the 6 to 14 year-old age-group, and consists of a five-year primary course, followed by three years of junior high school. In many areas, these eight years of education are provided in a single institution — almost 2 million of the total school population of over 11 million are catered for in this way. Ideally, every village would have its own school, but this is not always possible, and the only way to provide for children from the most isolated hamlets is by offering boarding accommodation. There are 118 Regional Primary Boarding Schools, with a total of about 65 000 pupils.

The Tunceli-Pülümür Regional Primary Boarding School

The school was first established in 1976, but was irreparably damaged in an earthquake in 1992 and had to be demolished. It was therefore necessary to build a new school, which is expected to be completed for the 1995-6 school year. The Tunceli-Pülümür school will be larger than the average, and will provide free education and accommodation for about 1 000 pupils (350 girls and 650 boys). In addition to the teaching accommodation required the complex will contain an administration unit, self-service cafeteria, gymnasium, dormitories for pupils, and housing for 70 teachers.

The Tunceli-Pülümür School



1. Classrooms and administration
2. Cafeteria
3. Gymnaisum
4. Boys' dormitory
5. Girls' dormitory
6. Teachers' housing
7. Teachers' housing development
8. Ceremony area

BEST COPY AVAIL

CONTACT:
Ms. E. Figen LEBLEBICIOGLU
Architect of the Section
Investments and School Facilities
Milli Egitim Bakanligi
Yatirimlar ve Tesisler
Dairesi Baskanligi B Blok
06500 Besevler, Ankara, Turkey

KARESUANDO SCHOOL, KIRUNA

KIRUNA is Sweden's northernmost municipality. It has an area about two-thirds that of Belgium and, in these terms, is thought to be the second largest municipality in the world. The population is 27 000, of whom 21 500 live in the town of Kiruna, site of a large iron-mining complex.

Karesuando is a village about 200 kilometres north of Kiruna town, in the tundra of Lappland. It is situated on the Muonio river, with Finland on the opposite bank and Norway only 40 kilometres away. During the Middle Ages this position made it an important point in the northern-Scandinavian trade network.

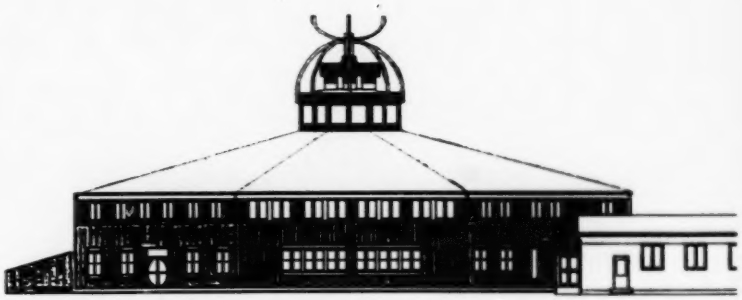
In the 1920s a school — painted in red and white in the typical Swedish way — was built in Karesuando. This building was extended in the 1960s following the introduction of 9-year compulsory education, and a gymnasium was also provided. Next door is a Saami (Lappish) school which has 18 pupils.

In 1991, a combination of increasing enrolments and the need to refurbish the buildings led the school board to decide to construct a new school for 110 pupils.

At the planning stage, the school staff, parents and pupils worked closely with politicians and administrators. One important aim was to give the school a greater role as a cultural centre and meeting place for the people of the village and the surrounding areas. Like other schools in Sweden, the school in Karesuando has described its aims and objectives in a school plan. It places an emphasis on the need to familiarise pupils with the culture, environment and society of Kiruna.

The school library will cooperate with the local library, and will become a centre for research in local history. During school holidays the facilities can be used for exhibitions and craft fairs, and catering can be provided using the school kitchen.

The construction of the new school was complicated by the presence of a lake, which frequently floods when the snows melt. The aim was to maintain the 1920s building, and to recapture some of its original character. Only a part of the run-down 1960s extension has been retained; the remainder, which had suffered from subsidence, was demolished.

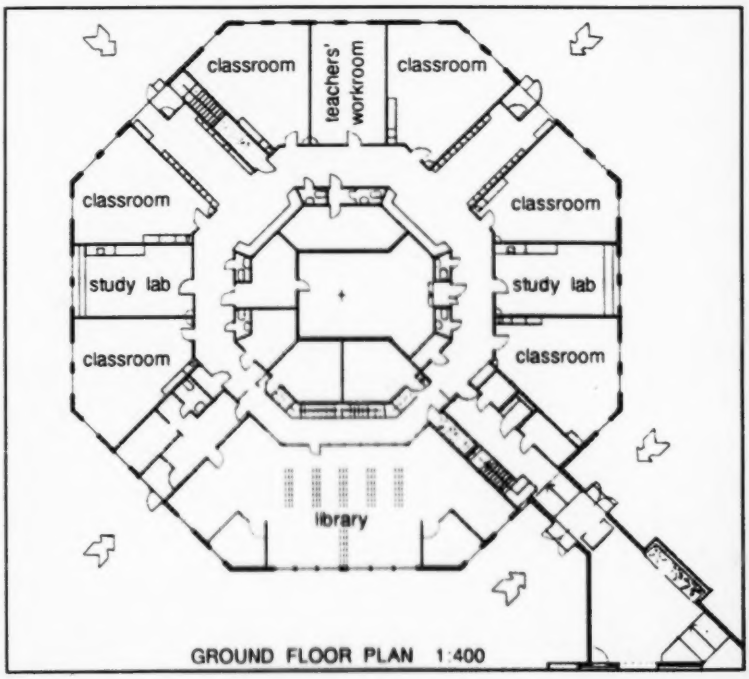


The focal point of the school has become a new two-storey octagonal building including teaching accommodation and a library. The classrooms are of varying shapes and areas, and all are equipped with computers.

The octagonal building with its hall lit from above and its open fire evokes the Lappish cone-shaped hut. The ceiling rises to a dome which is decorated with stylised reindeer horns, symbolising the regional fauna. Moreover, the compact design is highly energy-efficient, an important consideration in the hard climatic conditions.

The construction of a new school is a major investment for a small community. In a rural area, it is also an opportunity to provide for cultural and social activities which might otherwise not have been able to take place. These activities themselves contribute to the life of the school and the richness of its work, and enable it to play a full part in the life of the community.

CONTACT:
Mr. Erik NILSSON
Headmaster, Karesuando School
Box 187
98016 Karesuando, Sweden



Introducing the Property Management File

IN RECENT YEARS the Programme on Educational Building has issued a number of reports on various aspects of the management of educational property. Many of these documents are the outcome of international seminars and meetings which brought together leading experts in the field in question.

The purpose of the Property Management File is to bring together the main conclusions and findings of these reports in a concise and coherent way. Future issues of 'PEB Exchange' will each include a special section on one aspect of educational property management. The File will grow to become a distillation of experience and knowledge from OECD countries.

The File does not however pretend to be a comprehensive source of information for technical specialists. It is hoped rather that it will provide practical advice and guidance for administrators, architects and educators who have a responsibility for planning, designing, maintaining or managing educational buildings.

The Property Management File is first and foremost a compendium of advice and ideas, illustrated with examples, on a wide range of topics in educational property management. It takes as a starting point a certain philosophy of property management, which is summarised below. The remainder of this first chapter sets out a number of general principles of design and management which are common to many of the subjects treated, and will serve as an introduction to the chapters on specific topics which will follow.

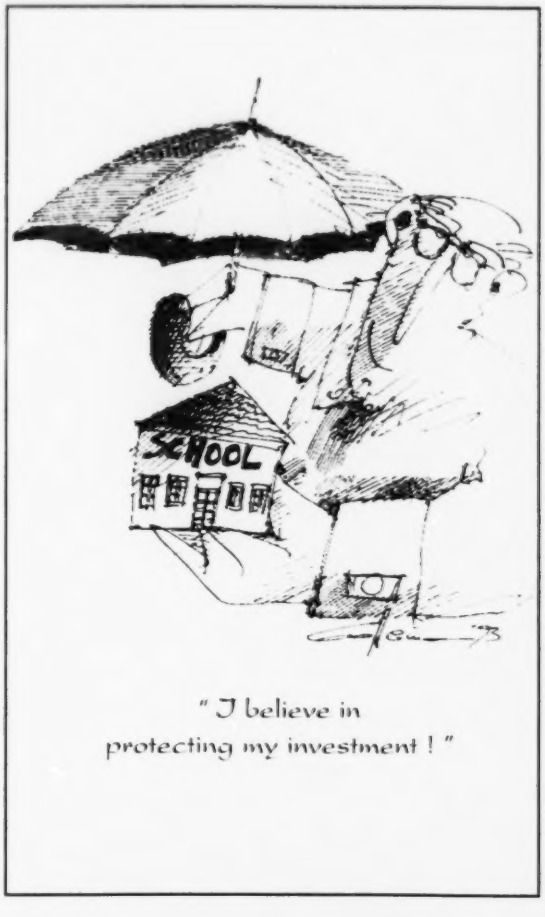
Many people have contributed to the development of the File, and it is not possible to acknowledge them all. However particular mention must be made of Adrian Leaman, Sam Cassels and Mike Duckenfield, who have worked closely with PEB in producing the File.

A PHILOSOPHY OF PROPERTY MANAGEMENT

Everyone spends a substantial proportion of their lives being educated and all OECD countries devote a substantial part of their budgets to the provision of education. Part of this money — up to one-fifth in some countries — is spent on the buildings in which education is carried out: on planning, building, maintaining, remodelling, cleaning, heating and protecting them. Educational property management is about making sure that the money which is thus allocated to schools and colleges is well-spent. It is a science that rests on a number of tenets which, although simple, are worth setting down.

- **The primary purpose of educational buildings is to serve the learner.**
- **Educational buildings must be responsive to the teaching and learning process, they should not constrain it.**
- **Educational buildings are and should be treated as a public asset to be managed as effectively as possible.**
- **Educational buildings are places of employment for teachers and others.**

Everything in the Property Management File follows from these four tenets.



"I believe in protecting my investment!"

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Some Principles of Good Design

The following design principles are by no means complete, nor are they immutable. They are distilled from more than ten years of work by the Programme on Educational Building. Essentially they suggest that good schools are created where sensitive design enhances sound educational practice in the service of the community. They apply equally to the adaptation, extension or remodelling of existing buildings, as to the creation of new ones.

• The design brief must recognise the primacy of the needs and aspirations of the users.

A wrong definition of the problem inevitably leads to the wrong solution. A building exists primarily to achieve an objective or to meet a need. A school is not an end in itself but a means towards the fulfilment of the needs of users and policy-makers. Needs may be expressed in quantitative terms but they are frequently abstract and difficult to define clearly. It is nonetheless essential to arrive at a brief which takes account of all legitimate points of view early in the design process. A clear statement of agreed priorities formulated at the beginning of the project will help avoid compromises later.

• The design process must reflect the reality of educational decision-making.

It is not sufficient to have a good design. Good schools will not be built if economic, political and social factors are ignored. Whatever the administrative structure of a country, there are three basic decision-making groups concerned with educational building: politicians and administrators; professionals and specialists; staff and users. Each of these groups contributes in different ways to the development of the brief, and each must be successfully integrated into the briefing process.

• Space standards should be adopted which reflect educational requirements.

Broad space standards (expressed as a number of square metres per pupil, for example) are the best way of ensuring that educational requirements are met. They give a rational basis for the allocation of resources and provide a common vocabulary for briefing, design and planning. There is no need for them to be expressed in great detail, however, and they should have the status of advice, not that of instructions. That is, there should be room for flexibility in their application.

• The building must be designed to last, and to be adaptable during its lifetime.

Buildings survive for a long time. Different elements of a building need replacing at different times. The 'intelligent' educational building will embody robust, simple design concepts so that it is able to cope with future change which is inevitable but unpredictable. The building fabric, the disposition of the spaces and the provision of the building services should be treated so that obsolescence in one does not make any other element unusable at a later date. Adaptability, the quality of a building that enables major alterations — relocation, replacement, removal or addition — to be made to its physical fabric, should be built in from the start.

• The building must incorporate flexibility without sacrificing appropriateness.

A flexible building is one which permits variations in the use made of it without requiring adaptation. A school needs to be able to cope with short-term changes in group sizes, teaching and learning methods, and educational activities. It should also be able to cope with the many unknown changes that the future will bring, whether through pedagogical practice, new technology or evolving demand. School buildings should therefore be flexible but they must also be functional. Their spaces should be well-defined, well-signposted, and clearly fitted for their intended use. Flexibility must not be bought at the expense of appropriateness.

• The building must offer a healthy and safe environment which supports and enhances the teaching and learning process.

The well-being of the users is a paramount concern in any public building. In a school this means not only a healthy and safe environment, but one which is conducive to learning and in which pupils and students feel at ease. As knowledge becomes available about the influences of the indoor environment on users — both positive and negative — this knowledge should be incorporated in all new and refurbished school buildings.

Some Principles of Good Management

Those who have participated in PEB seminars and contributed to PEB documents have a wealth of experience of property management. What follows is a selection of some of the principles of management which most frequently recur in PEB's work. They are offered as a code of practice, not as a set of rigid rules.

• Ensure that the running and maintenance of the building is adequately funded.

Budgets for premises-related expenditure, especially for maintenance, are often vulnerable to cost-cutting exercises. Good management demands that realistic budget levels are set which reflect actual and foreseen need, and that so far as possible these budgets are dedicated to clearly-defined purposes. Even the best management techniques will fail if resources are inadequate. It is essential that at design stage the construction and running costs of a building be assessed over the life-cycle of the building, so that false economies are not made in the initial investment.

• Collect information on the building stock and its performance in use.

Effective management of educational buildings depends on accurate factual information as a basis for decision-making and problem-solving. Moreover, the lack of such information will weaken schools' abilities to bid for resources individually and collectively. Managers should maintain up-to-date records about the building stock; monitor the performance of buildings and how they are used; and establish a core of information about sites and buildings. Data should also be collected at regular intervals on the performance of the physical environment (e.g. heat, noise, dust), user behaviour (e.g. incidence of vandalism), space utilisation, and the condition of the building stock.

• Move decisions as close as possible to their point of effect.

Involve professional staff, building users, and others with an interest in the building (such as fire service officials, crime prevention officers, health and safety officers, and environmental health officers) as much as possible in the management process. This not only provides the management team with valuable information about potential problems, it also lets users know that their opinions are respected and acted upon. It is important however that management only seeks the involvement of users in areas in which it is competent to act, so that false expectations are not raised.

• Provide practical information and training aimed at problem-solving.

Any manager will be able to work more effectively if provided with factual, up-to-date information and advice. Schools are no exception to this. Headteachers, bursars and other educational professionals responsible for buildings and their management rarely have at their disposal the guidance and the information necessary for the systems and organisations for which they are responsible to work well. Information is often too general to be of practical use. Training in property management is often non-existent. The solution is to provide hard data and appropriate training aimed at day-to-day management and problem-solving.

• Insist on quality in the school environment.

Ensuring that educational buildings support national educational objectives and provide a safe and secure environment which minimises risks to the occupants is a matter of management as well as of design. The creation and maintenance of quality in the building itself, its appearance, its maintenance and in its use, will stimulate quality in education. Even in decentralised systems appropriate minimum standards must be set and must be adhered to.

Some Practical Advice

To complement the principles of design and of management above, the following suggestions of practical ways to improve the efficiency and quality of the building are offered.

• Provide incentives to good management.

The users of a building should have a personal interest in the efficient use of the space they occupy. One way to do this is to allocate each group of users a budget for energy, cleaning, maintenance and other premises-related costs, and allow them to benefit from a proportion of any savings made. In such a system it is important to have flexibility (for example, virement) between budget heads and between financial years.

• Set targets for performance.

Performance targets (such as "make a 5 per cent saving in the annual consumption of energy every year for 5 years") are a way of translating management priorities into action. They are particularly useful for controlling costs. Targets which relate to a building's past performance (rather than being expressed in absolute terms) can be used as criteria by which to judge educational buildings of very different types or in very different circumstances. The continual comparison and review of actual performance against targets leads to better everyday operation.

• Define clear boundaries.

This applies to both the physical boundaries of the school buildings and site, and to the behaviour of users within the buildings. Clear definition of the spaces in the school, together with guidance on how they were intended to be used and who is responsible for looking after them, will lead to gradual improvements in the way the building is treated. Many of these changes may be almost imperceptible in themselves, but together they will lead to the site and buildings looking cared for and, as a consequence, a sense of pride amongst their occupants.

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• Understand changing time periods.

There are constant changes in the pattern of use of educational buildings — from periods of high activity during the day and during termtime, to periods of relative quiet at night and during vacations. The complexity of these use patterns, and their implications for safety, security and building management, need to be understood and planned for in advance. For example, research has shown that schools are at their most vulnerable to fire, malicious damage, and theft during the periods of change from one state to another (e.g. at the end of term, when procedures are less formal).

• Correct problems as soon as they arise.

A rapid response to what often appear to be trivial problems (such as broken doors or windows, litter and graffiti) is the essence of good property management. The management system must not only be capable of identifying problems when they arise, but must assign clear responsibility for dealing with them, and put into effect arrangements to correct them.

• Keep information to the essential, and keep it up-to-date.

Make sure that the management information system contains all essential information, and nothing more. It is almost as difficult to cope with too much information as too little. A cumbersome or over-elaborate system is difficult and expensive to maintain and may collapse.

Core Information Systems

Many managers of school systems have inadequate knowledge of the facilities for which they are responsible. This lack of information can become a problem when, in planning for future needs, accurate assessments have to be made of the potential contribution of existing buildings and sites. Detailed knowledge of these facilities is needed if problems are to be analysed and options examined. One answer is the development of a **core information system**, the main function of which is to provide managers with up-to-date data on those key variables describing facilities and their performance.

A core information system provides a link between the different groups involved in property allocation and use. There are essentially three different levels — school, local authority and central or regional government. The information in the system should mean the same to everyone involved and should act as an aid to the negotiations which take place prior to all decision-making. If effectively used the core can be a prime resource in the recognition of existing or emerging problems.

The system must be easy to update, easy to use and practical. Most important is ease of updating. Any database that is incorrect or otherwise does not give an accurate picture of existing facilities will quickly fall into disrepute. The most frequent cause of inaccuracy is the attempt to collect too much data.

The core information system will be a **shared resource** for all the specialist functions of school management — such as maintenance, energy management, needs assessment, and capital programme management. Those responsible for each of these specialised tasks will have their own databases of information specific to their own requirements, but these will complement the information held in the core.

Specialists will have differing views of what constitutes the right information **content** for such a system. Moreover, decision makers at central, regional and local levels will also have different views of what is appropriate for their needs. This tension can lead either to a search for an all-embracing unified system or to fragmentation into a number of separate and incompatible systems. Both hinder progress: the core should consist of the essential information common to the needs of all users, and nothing more.

There are three basic types of infomation which might be contained in the core:

- **factual data** describing sites, buildings and spaces;
- **performance indicators** related to accepted standards;
- **action bulletins** which highlight real intentions and progress made.

The core should therefore:

- contain critical items of information from each specialist field;
- be readily accessible and easy to understand and use;
- be constantly evaluated and updated.

The overriding rule is to minimise the amount of information and maximise its usefulness.

For all but the smallest school systems the information system is likely to be held on computer. It is not easy to develop in-house information systems. Existing computer systems and entrenched attitudes on how information should be organised and made available tend to restrict room for manoeuvre. For premises management a **user-driven system** is almost invariably the right solution, which means that managers must be able to define their requirements when the system is being established.

Data collection is expensive and time consuming. In order to lessen the possibilities of error and to make the process of updating information easier, data survey forms and methods of recording should be professionally designed. Many problems are created when field surveyors misunderstand what is required of them, or do not fill in the survey form correctly.

Where computer databases are used the process of **data transfer** from the field-survey form into the computer should be as simple and error-free as possible. Some authorities will have relational databases in which all the property information is stored, and the school data will be a subset of the larger system. Where possible data should be verified so that incorrect entries are eliminated. It is often best to build up a core information system gradually.

REVITALISING RURAL INDUSTRY

EDUCATION in rural areas does not consist only of primary schools. Finding ways to offer both vocational and higher education to those who want it, without obliging them to leave their home towns and villages, is an aspect of rural education which is often overlooked.

In rural areas, the agricultural industry predominates, but there are a number of other industries, primary and secondary, which have installed themselves in rural areas, and which also need access to modern technology, up-to-date approaches to manufacturing and management, and a skilled and flexible workforce if they are to survive.

The Beauce-Appalachians region of Quebec, Canada, lies between the St. Lawrence river and the US border. A study carried out at the end of the 1980s confirmed that the 80 000 inhabitants of the area were under-educated by comparison with the rest of Quebec, and identified lack of an appropriate post-secondary educational infrastructure as one of the main causes. Moreover, the lack of appropriate qualifications amongst the workforce was proving to be a barrier to the growth of industry and business.

A number of initiatives were taken to remedy the situation, among them the creation of the *Centre intégré de mécanique industrielle de la Chaudière* (CIMIC) in St. Georges. The objectives of the CIMIC are:

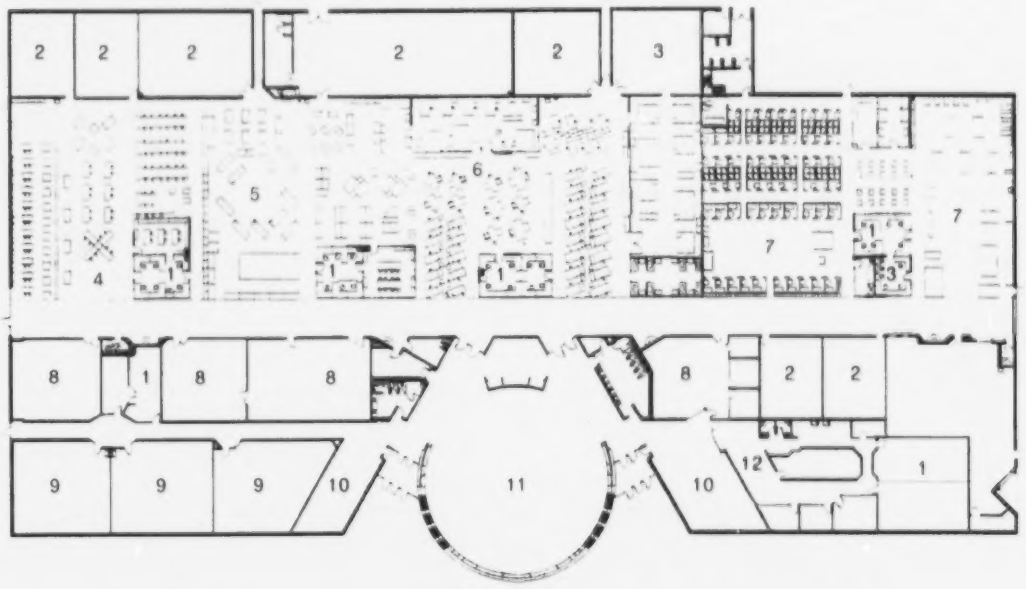
- to provide training, updating and retraining appropriate to technological developments at regional, national and international level;
- to help the network of small and medium-sized businesses and industries in the region to survive and develop;
- to carry out research and development.

In human and organisational terms, the CIMIC brings together in one team the School Board of "La Chaudière-Etchemin", the Beauce-Appalachians College, the Appalachian University Centre, several organisations working for the economic development of the region and the major employers.

In physical terms, the CIMIC, which is nearing completion, will include facilities for industrial design, electrical maintenance, mechanical engineering, welding, manufacturing techniques, and computer numerically-controlled manufacturing, giving a total surface area of 7 200 square metres.

CONTACT:
Commission scolaire
de la Chaudière-Etchemin
1925, 118e Rue, Ville de Saint-Georges
Québec G5Y 7R7, Canada

CIMIC



1. Teachers' rooms
2. Technology rooms
3. Informatics
4. Electrical maintenance
5. Mechanical engineering
6. Manufacturing techniques
7. Welding
8. Laboratories
9. Industrial design
10. Lockers/coat racks
11. Group meeting room
12. Administration

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SECONDARY EDUCATION IN THE EAST TYROL

RESPONSIBILITY for education in Austria is divided between federal and provincial level. The federal authorities are responsible for the curriculum at all levels, for the provision of facilities for academic secondary, intermediate and higher vocational schools, and for special education; the provincial authorities are generally responsible for elementary schools, and other secondary schools, including vocational schools. Geographical conditions make it particularly difficult to provide for every child secondary education which is appropriate to his or her capabilities. Equality of opportunity may be an ideal, rather than a realistic objective, but it is a priority of educational policy to compensate for the disparity between urban and rural educational opportunities, and to improve the educational career options open to children from rural areas. How this policy is being implemented is illustrated below by the example of the East Tyrol.

The geography of the East Tyrol

East Tyrol is one of the nine administrative districts of the Tyrol Province. It is a self-contained mountain district of 2 020 square kilometres, with half of its area lying more than 2 000 metres above sea level. The people of East Tyrol are mostly upland farmers, but tourism, trade and light industry are also important sectors of the economy. The district's 33 local communities are found not only in the valleys but also on the south-facing mountain slopes up to 1 500 metres; there are also some small permanent settlements even higher in the alpine pastures. The settlement pattern is characterised by a large number of hamlets and isolated farms. This situation makes it difficult for people from outlying settlements to get to the larger communities, especially in winter.

Population

The district's population grew from 38 000 in 1951 to more than 48 000 in 1991. The highest growth rates were not in the district centre, Lienz, which now has just under 12 000 inhabitants, but in some of the communities situated in the Lienz basin. Despite this overall growth, the population has dropped, sometimes markedly, in 11 communities since 1981.

Statistics show a decline in births from a peak in 1966 of 1 139 to fewer than 700 annually in recent years. The Austrian Institute for Regional Planning expects pupil numbers in compulsory schools to decline by 4 per cent between 1986 and 2011, an amount smaller than the drop expected for Austria as a whole (12 per cent).

Schools

In the 1950s East Tyrol had 60 primary schools in its 33 communities. Forty-six of these still exist (28 of them are in facilities built in the past four decades), but since a reorganisation in 1979 only the first four years of compulsory education are taught in primary schools. Fifth-grade pupils (age 10) move on either to compulsory 4-year secondary education or to one of several different types of academic secondary school (AHS). The Lienz district has nine compulsory secondary schools, and there are four academic secondary schools, all of which are situated in the district centre.

Of the 46 primary schools, only 17 have four or more classes. In the remaining 29, classes cover two or more grades: 9 are three-class schools, 11 are two-class schools and 9 are single-class schools.

The greatest asset of the single-room primary school, close to home, is felt to be that the children are able to remain in contact with family and village life. The strength of the small village schools has led legislators to try out a special kind of compulsory secondary school in the district. Naturally, it is not possible for every small community to have a secondary school, but in two communities a special 'mini-secondary school' has been created. Many pupils prefer to receive secondary education at these 'mini' schools, rather than travel long distances to the nearest academic secondary school. In 1991-92, 101 pupils in five classes attended the school in St. Jakob in Defreggen, and 62 pupils in four classes attended the Kals/Großglockner school.

A substantial number of pupils in the East Tyrol have to spend long periods travelling if they wish to attend schools in Lienz. The provision of a network of compulsory secondary schools may provide an alternative for them, provided that they are not disadvantaged when it comes to time to transfer to the next level.

The need for political will

If small schools are to be maintained in rural areas, appropriate resources of staff and facilities must be provided. This is essentially a political decision, and in Austria, where local authorities at the

village level are responsible for providing and maintaining schools, it is likely that they will continue to do so, so long as it is perceived to be in their interest. To make the most of the buildings, primary schools in particular will often be designed to incorporate other municipal or community facilities.

Where the facilities are the responsibility of the federal authorities, a willingness on their part to provide the resources required is also necessary. In Lienz, the federal authorities have provided substantial resources for extending, upgrading or renovating the academic secondary schools, and the intermediate and higher vocational schools. The co-operation of the local authority, for example through the provision of a site, is a prerequisite for success. A particularly fine example of co-operation and sensitive adaptation of an old building to today's educational requirements is the refurbishment of the Bundesoberstufenrealgymnasium in Lienz.

Conclusions

In seeking to provide equality of opportunity, the following principles need to be observed:

- educational institutions should be distributed over the entire area, and should be as close as possible to where pupils and students live;
- the network of institutions should provide a progression from elementary school to continuing education, and should offer to all the possibility of reaching the highest educational level;
- where it no longer makes sense to provide human or financial resources on the scale required to maintain a school in a particular locality, other options must be explored, and any drawbacks offset by compensating measures such as free transport, more flexible organisation, or more flexible curricula;
- the aim should be to enable children to stay within their families and their communities as long as possible.

CONTACT:
Dr. Anton NEURURER
Landesschulrat für Tirol
Innrain 1
6010 Innsbruck, Austria

EDUCATION INFRASTRUCTURE IN RURAL AREAS

The following is an abstract of the background paper written by Martine Safra for the PEB seminar held on this subject in Belgium in May 1993.

The characteristics of rural areas are now becoming more clearly identified in the OECD countries. The position in Australia, where some families may live hundreds of miles from their nearest neighbours, is quite different from western Europe, where one small village may have half-a-dozen similar villages within a ten-mile radius. The contrasts are clear, but the general demographic context in the OECD countries is similar and goes some way to explain concern over the depopulation of the countryside and, indeed, over the possibility of rural areas simply being abandoned as people move to already over-populated towns.

Christian Ferrari/R.E.A.

Between 1945 and 1975, the urban population of the OECD countries rose considerably: predominantly rural countries became predominantly urban ones. But the move away from the countryside, which is traditionally raised in every discussion, now has to be qualified. In Italy the population of rural communes rose by nearly 3 per cent during the 1980s, and upland areas regained what they had lost in the previous decade. In England and Wales the population of remote districts has risen by 11 per cent over the last ten years.

This partial revival of the countryside covers very different circumstances, with some areas in sharp decline and others coping comfortably. European Community policies towards the most disadvantaged regions, for instance, take due account of these contrasts. In France 60 per cent of rural communes are growing; but the 40 per cent that are declining are all in larger areas which face a

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more general crisis. The main feature is no longer the dichotomy between town and country, but the disparities between regions.

Population movements, in whatever direction, necessarily raise questions about the number of schools available. But changes in the nature of rural areas are occurring at the same time. Agricultural employment is falling sharply with the decline of the family farm and the rise of large mechanised holdings; the proportion of retired people, industrial and service workers and white-collar employees is accordingly increasing. The residential function of rural areas and small country-towns is developing, in part through greater mobility, meaning that people can increasingly live in one place and work in another. All these changes are bound to affect the demand for education.

Schooling is compulsory for at least nine years, as a general rule, in the OECD countries. Virtually all children of school age receive an education, with the exception of a few minorities and some children in the most backward rural areas.

With those exceptions, the OECD countries have managed, in various ways, to educate their young people in rural areas. Most commonly there are small schools, with one to three teachers. In Greece, for instance, there were nearly 2 000 primary schools with a single teacher in 1991; in Finland, most schools had only two or three teachers; in Portugal, although over 2 200 primary schools had closed between 1980 and 1990, nearly 40 per cent still have only one teacher.

To counter the drawbacks of the very small school, countries basically apply one of two methods. The first is to combine schools. Sweden has schools covering the first two cycles of compulsory education (up to around age twelve), with about a hundred pupils drawn from a fairly wide area. The second method is to introduce local authority co-operation. In some cases this, as in France or Switzerland, is simply a matter of a central commune catering for children from adjoining communes where the schools have closed. Elsewhere a school network is formed, as in Wales, where one school may operate on three sites, with the same management. There are also cases, in Germany and parts of the United States, where several authorities agree to close their own schools and join forces to provide a multi-class school in one place.

France and Sweden

In France, to prevent the disappearance of single-class schools, they have often — since the early 1970s — been networked in an intercommunal education grouping (see box). But this course has a number of drawbacks. It involves a series of small schools that are expensive to keep up, with little scope for introducing diversified teaching equipment, or for the teachers to work together. In addition, the allocation of pupils by age-groups means that they lose the benefits of mixing with younger or older children.

The French Education Ministry now favours a different kind of arrangement: establishing a concentrated intercommunal school on a single site, with a kindergarten and several elementary classes, for children from a number of communes. For the local authorities concerned this means taking a bold and politically difficult step, closing their own school and assuming a share of the considerable capital outlay. A merger of this kind is reckoned to allow provision of the necessary education facilities (library, documentation centre, computers, for instance) and ancillary services (day-care outside school hours, canteen). The challenge is to keep the children in what will still be a village school (even if it is further away), one which draws on the traditional strengths of rural schools while providing the normal range of services found in urban areas.

In Sweden, by comparison, most rural areas are already served by schools with an enrolment of at least 90 or 100, combining kindergarten classes and the first two levels of compulsory schooling (ages 7 to 12). Only a few small schools remain in the most isolated areas in the far north. Even there, larger school complexes are planned.

Many of Sweden's rural schools serve a variety of activities: kindergarten, day-care after classes, municipal library, talks and meetings, cultural events, adult education, sport, and so on.

The forms of government in the two countries have to be considered here. In France, responsibility for schools is shared between the central government, which

France: 8 084 Rural Communes

France has 8 084 rural communes (22 per cent of the national total of communes) with over 120 000 children of primary school age (2 per cent of the total). The peri-urban areas have 21 per cent of all children, and the towns and cities 77 per cent.

The education structure in rural areas, and even in the peri-urban ones, is marked by a predominance of small schools: 36 per cent of French schools (or 13 351 schools) have one or two classes, and take in 9 per cent of French children of primary-school age.

There are relatively few schools with very small enrolments: 13 have from one to five pupils, 193 have from six to eight, and 8 300 have nine or more. In many cases, single-class schools are part of an intercommunal network, the *Regroupement pédagogique intercommunal* (RPI): of the 8 506 single-class schools, around 5 000 belong to a group of this kind. That means that the remaining 3 500 have a single class for children of all levels, from age five (and sometimes four in special cases) to age 11. Everywhere else, the individual villages in the RPI group still have a school, with one or two classes. For instance, one village may have the kindergarten classes, another the children aged six to eight, and a third village the oldest children. The structure of schooling may be adjusted from one year to another. To establish a RPI network, the communes have to be prepared to work together under a formal agreement.

These arrangements, which have been extended substantially since the early 1970s, have generally been viewed as a way of preserving the village school, while avoiding a return to the single-class system which is increasingly difficult to staff.

controls teaching and teachers, and the local authorities, responsible for school buildings and their operation. It should be noted that France has 36 000 local authorities (communes), and co-operation among them is not always easy to arrange. As a result, it is by no means easy to apply consistent planning over a sufficiently large area, since any change entails lengthy negotiations with numerous individuals and institutions. In Sweden the local authorities have very broad powers, taking in education. The size of these territorial units (there are now only 286 local authorities in Sweden) accordingly facilitates education planning.

Bruno Proche/R.E.A.

New technologies can liberate rural schools.

Does the rural school exist?

Comparing the positions in France and Sweden raises one fundamental question: over and above the differing definitions of rural areas or indeed schools, is there something special about a rural school? Or is it simply a projection, on a smaller scale, of an urban model?

From the standpoint of the rural school, two main approaches can be identified. One sees the rural school as a way of keeping the countryside alive, the other focuses more on the children's development. With the first approach we find concern that the children should feel that they belong to their region, are in touch with their roots, while — as in any school — receiving affective, social, physical and cognitive education.

The second approach lays emphasis on the importance of the child's learning to co-operate with others, to feel that he belongs to a wider world. This approach seems to some extent torn between the hope that the children will stay in their rural area and the sense that they are part of a more mobile world that calls for common learning objectives. All the same, the methods employed draw upon the rural environment.

Analysis of the way the school is — or should ideally be — organised brings this indecision into the open. A small, isolated school encourages life in the village and, to some degree, is in the child's interests. It rules out long and tiring journeys, and the child will benefit from the mixture of ages. A school taking in children from a number of villages reduces the isolation of the teachers, who can work with their peers, provides pupils with opportunities for more specialised subjects (music, technology, languages) and its managers can hope for lower operating costs, although transport is an expensive and unavoidable item. In between small isolated schools and formal mergers, there is frequent networking among small schools, arranged either officially (core and satellite schools closely interlinked, or schools of similar sizes under single management) or by more informal means (teacher exchanges, sports matches and shared cultural events).

In all these cases the use of new technology, though not common at present, can help overcome the isolation of small schools. The 'read-only memory' compact disc (CD-ROM) offers low-cost information resources which until quite recently would have been the envy of many large schools. The fax system opens up opportunities for exchanges and communication with schools elsewhere in the country, and indeed abroad.

There are several ways of broadening the functions allocated to the school — in Sweden, for instance, towards ancillary activities and adult education. Far more than urban schools, indeed, rural ones seem likely to become integrated units providing a whole range of services.

Turning to the architecture of rural schools, given the demographic uncertainties, the new buildings should allow for change, more so than in towns. If enrolment in a school declines, the building can then be converted into housing or used for a range of community purposes. It can also be extended, if need be. In any case, flexibility allows scope for various forms of teaching and a range of class sizes. This is particularly necessary in rural areas where classes combining several levels are frequent.

Again more so than in towns, the facilities need to be designed to avoid cultural isolation. If a school is attractive, becomes part of the children's world, and gives them a sense of belonging, it will, both through the standard of school work and the standard of the building, help to keep the local population in place. But the choice of design is not neutral, and entails identifying requirements, and hence close consultations with users — teachers, pupils, parents.

A school can have a positive impact on its surroundings if it is particularly attractive to the families who use it, provides the community with additional services and — by offering opportunities for adult education, for example — helps to preserve and expand employment. For these developments to occur, the school must cease to be an aloof, single-purpose unit, and comprehensive policies for it must be defined. The school also has to be ready and willing to work with those policies.

CONTACT:
Mme. Martine SAFRA
Ministère de l'Éducation nationale
107, rue de Grenelle
75007 Paris
France

BEST COPY AVAILABLE

Is small beautiful?

Administrators and planners who have to make decisions about school size are keenly aware that ideally every community should have a school of its own, but financial constraints require them to minimise the unit costs of education. "Are small schools the answer?" (ISBN 0-85092-302-6) highlights the advantages and problems of schools of different sizes, from the social, economic and educational points of view. It draws on a wide range of literature about the provision of education in sparsely-populated areas in both developed and less-developed countries.

The book, written by Mark Bray of the University of Hong Kong, is available at the price of £4 from: Commonwealth Secretariat Publications, Marlborough House, Pall Mall, London SW1Y 5HX, United Kingdom.

France's schools

"Les écoles de la République" is a lavishly illustrated 440-page volume about schools in France, from the beginning of public education to the present day. More than 1 000 establishments are described, and each of France's 95 *départements* is represented by a selection of its schools. The text includes historical information, as well as snippets about former pupils, and 200 thematic articles on a vast range of subjects from school meals to the origins of pelota.

"Les écoles de la République" (ISBN 2-908975-15-7) is available at the price of 460FF from: Eclectis, 60505 Chantilly Cedex, France.

Interskola 25

To commemorate the first twenty-five years of Interskola a collection of papers on rural education in northern Europe has been published. Interskola is an informal association of people concerned with improving the quality and range of schooling in sparsely-populated areas. Its members come principally from the Nordic countries, the United Kingdom and Ireland.

"Interskola 25: Rural education in an international perspective" (ISBN 82-7711-001-4) is available price NKr 125 or £12 (postage and packing included) from: Statens utdanningskontor i Nordland, Sjøgt. 1, 8006 Bodø, Norway.

Special needs education

The October 1993 issue of the European Journal of Special Needs Education (EJSNE) is devoted to a number of papers on the integration of children with disabilities into mainstream education.

The papers were commissioned by the OECD in an attempt to bring together as comprehensive an account as possible of international research on integration. They form part of a wider study, intended to inform policy decisions, that brings together issues relating to the process of integration in OECD countries, as well as investigations of good practice through case studies.

Copies of this special issue may be obtained by writing to: Peter Evans, OECD, CERI, 2 rue André-Pascal, 75775 Paris Cedex 16, France.

To subscribe to EJSNE, contact: International Thompson Publishing Services Limited, Routledge Subscriptions Department, North Way, Andover, Hampshire SP10 5BE, United Kingdom.

Re-organising the university year

The Committee on the Organisation of the Academic Year has just published a report in which the main proposal is to change the structure of the typical academic year in UK universities from three 10-week terms, to two 15-week semesters to be completed betweeen September and mid-May, thus allowing for a third period of teaching in the summer. The report considers in some detail the implications for premises of the proposed change, as well as its effect on the examination timetable.

Copies of the report are available, price £5 from: External Relations Department, HEFCE, Northavon House, Coldharbour Lane, Bristol BS6 1QD, United Kingdom.

The next issue of PEB Exchange will include a more detailed report on the Committee's proposals.

Estate management

The gross area of further education college buildings in England is estimated to be 9.1 million square metres, with a replacement value of some £7 billion. A new publication from the Further Education Funding Council (FEFC) offers advice on the management of this estate. It includes sections on the development of an accommodation strategy, maintenance planning, space utilisation, and investment appraisal.

Write to: George Edwards, FEFC, Sheriff's Orchard, Greyfriars Road, Coventry CV1 3PJ, United Kingdom.

Security lighting

The latest addition to the *Crime prevention in schools* series from the DFE in England is entitled "Security lighting". This 24-page publication provides guidance and technical advice on the design, purchase, installation and maintenance of security-lighting systems for educational buildings. It is intended for headteachers, school governors, and technical consultants and includes three case studies.

Security lighting (Building Bulletin 78) is available, price £4-25, from: HMSO Publications Centre, PO Box 276, London SW8 5DT, United Kingdom (fax: 44 71 873 8200).

Think energy!

Making an analysis of the environmental and energy impact of your school is just one of the activities proposed in *"Des watts entre les deux oreilles"*, a book intended to make energy-consciousness accessible to everyone, young or old. It contains three main sections: the energy challenge, the pedagogical challenge, and educational activities for a rational use of energy.

"Des watts entre les deux oreilles" is published by: Service des comunications et liaison avec le milieu, Centrale de l'enseignement du Québec, 1170 boulevard Lebourgneuf, Bureau 300, Québec (Québec) G2K 2G1, Canada.

OECD Publications on Education

The OECD publishes reports and statistics on a wide range of public policy issues. Featured below are some recent publications on educational topics. To receive regular information about new OECD publications or the annual publications catalogue, please contact the Publications Service at one of the addresses given on this page.

Just Published

Education at a Glance: OECD Indicators (1993)

This second edition of *Education at a Glance*, covering the 1990-91 school year, includes a set of 38 indicators concerning: the contexts of education (e.g. demographic, social, economic); costs, resources and school processes; and the results of education (student, system and labour-market outcomes). The publication contains both English and French texts.

(96 93 03 3) ISBN 92-64-03894-9, 260 pages.

PEB Publications

Decentralisation and Educational Building Management: The Impact of Recent Reforms (1992)

In OECD countries, recent moves to decentralise responsibility — from central government to local authorities, and from local authorities to schools themselves — have focused attention on the educational infrastructure and how it is managed. This report analyses the situation in a selected number of OECD countries and investigates how effective property management can improve the quality of educational systems.

(95 92 01 1) ISBN 92-64-13660-6, 88 pages.

New Technology and its Impact on Educational Buildings (1992)

Written by Norman Willis, this publication describes what technology may have to offer and how it might change the learning process during the next twenty years. The review should help facility planners and school managers make informed decisions about what measures may improve their chances of introducing new technologies successfully and allow them to avoid potentially costly mistakes.

(02 92 15 1) ISBN 92-64-13756-4, 52 pages.

Quality and Equal Opportunity

High Quality Education and Training for All (1992)

This publication presents the main discussions and conclusions of the meeting of ministers of education held at OECD headquarters in November 1990.

(91 92 03 1) ISBN 92-64-13778-5, 152 pages.

Ordering Publications

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"PEB Exchange", OECD Publications, printed in France.

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PEB diary

MARCH

7 *7-11 March 1994*

The OECD Centre for Educational Research and Innovation (CERI) will be holding an international conference in Braunschweig, Germany, on environmental education policy and practice. For more information, contact:
Mrs. Kathleen Kelly-Lainé
OECD/CERI
2, rue André-Pascal
75775 Paris Cedex 16
France
Fax: (33 1) 45 24 90 98

18 *18 March 1994*

The International Union of Architects (UIA) is holding a "European ideas competition" for the innovative use of passive cooling principles in the design of mixed-use buildings. The competition, which includes prizes ranging from 1 000 to 16 000 ECU, is open to licensed architects in the EU, Austria, Finland, Liechtenstein, Norway and Sweden, as well as to students of architecture registered at a school in one of the countries cited. The closing date for registrations is 18 March (group registrations are possible for students). For more information, write to:
Ms. Eileen Fitzgerald
Energy Research Group
University College Dublin
Richview, Clonskeagh
Dublin 14, Ireland
Fax: (353 1) 283 89 08

MAY

9 *9-12 May 1994*

The OECD Programme on Educational Building (PEB), in co-operation with the Ministry of Education of the Province of Quebec, will be holding a conference on the evolving requirements for facilities in vocational and technical education. For more information, contact the PEB Secretariat at the address or fax number given on this page.

16 *16-20 May 1994*

The International Council for Building Research Task Group 8 is organising an international conference on "Buildings and the environment", to be held in Watford, United Kingdom. For more information, write to:
Building and the Environment
Event Unit, BEEG
B17 Bldg. Research Establishment
Garston, Watford
Herts WD2 7JR
United Kingdom
Fax: (44 923) 664 787

SEPTEMBER

25 *25-28 September 1994*

An international conference on the latest in technology and learning environments "LETA '94" will be held in Adelaide, Australia. For more information, see page 3 of the newsletter.